**Directions for How Thick Is It: Viscosity and Volcanoes**

Prepare the materials as follows:

* Label one cup High Viscosity, one cup Low Viscosity, and one cup Medium Viscosity. Use the masking tape on the table to label the cups and plates.
* Label one plate High Viscosity; one plate Low Viscosity and one plate Medium Viscosity.
* Measure about 60 ml. (1/4 cup) flour into each cup. The see through cup on the table is a ¼ cup measure.
* Add 30 ml. (2 tablespoons) water to cup of flour labeled High Viscosity and stir until mixed.
* Add 52 ml (3 1/2 tablespoons) water to cup of flour labeled Low Viscosity and stir until mixed.
* Add 37 ml (2 1/2 tablespoons) water to cup of flour labeled Medium Viscosity and stir until mixed.

 Reminder- You should record your observations (speed of flow, area of base, and height) in the data table given on page 6 of your Mountain Building Journal as you complete the investigation.

 Have students slowly pour the contents of the High Viscosity cup of flour onto the plate labeled High Viscosity.

* Observe how fast the “lava” flowed from the cup using relative terms such as fast, medium or slow.
* Record your observations in your journals in the 'speed of flow' column.

 Repeat step #6 with the Medium and Low Viscosity lavas and the respective plates.

 Allow all three of your lava mountains to “rest” for 2 minutes (before measuring the base diameter in two directions).

* Determine the base diameter of the volcano in two directions: ("north-south" and "east-west. You should multiply these two numbers together to determine how large of an area each mountain base covers. Record.
* Measure and record the height of each mountain.

 Review and Reflection: Answer the questions on page 13 of your journals.